

March 12, 2013

SARAH JOHNSON PHILLIPS Direct (612) 373-8843 Facsimile (612) 373-8881

sjphillips@stoel.com

#### VIA E-DOCKET FILING

Dr. Burl W. Haar Executive Secretary Minnesota Public Utilities Commission 121 Seventh Place East, Suite 350 Saint Paul, MN 55101-2147

Re: Revision to Lake Country Wind Energy, LLC Petition for Site Permit Amendment or Modification

Docket No. IP 6846/WS-10-798

Dear Dr. Haar:

In January, Lake Country Wind Energy, LLC ("Lake Country") filed a petition (the "Petition") requesting amendments to the site permit (the "Permit") for its planned 41 MW wind project in Kandiyohi and Meeker Counties (the "Project"). Lake Country continues to respectfully request that the Commission approve amendments extending deadlines contained in Sections 10.2 and 10.3 of the Permit and the term of the Permit. However, Lake Country's turbine plans now have progressed enough to revise Lake Country's amendment request to include more detail on turbine options for the Project.

#### **Revised Amendment Request**

As described in the Petition, turbine technology and availability have changed substantially in the last two years, causing Lake Country to revise its turbine plans. Lake Country is now in the process of negotiating turbine supply contracts for the Project and recently narrowed its choices to three turbine models: the REpower 1.0 MW MM100, Gamesa 2.0 MW G97, or the General Electric 1.7-100 turbine. Based on this new information, Lake Country is revising its request to amend Section 1.0 of the Permit as follows:

The up to 41 MW nameplate capacity LWECS authorized to be constructed in this Permit will be developed and constructed by the permittee. The project will consist of an array of 20 REpower 2.05 MW MM92 wind turbines. The turbines will consist of 328 foot towers with 269 foot diameter rotors for a maximum height of 479 feet up to 20 REpower 2.0 MW



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MM100 wind turbines on 328-foot (100-meter) towers with a rotor diameter of 328 feet (100 meters), up to 20 Gamesa 2.0 MW G97 wind turbines on 295-foot (90-meter) towers with a rotor diameter of 318 feet (97 meters), or up to 23 1.7 MW General Electric 1.7-100 turbines on 262-foot (80-meter) towers with rotor diameters of 328 feet (100 meters). The project also will require the following associated facilities....

#### **Revised Turbine Layout Maps**

Lake Country has prepared two updated preliminary turbine layout alternatives to accommodate either 23 turbines if the GE model is chosen or 20 turbines if either the REpower or Gamesa model is chosen. These updated maps are enclosed and labeled Exhibit 3A (REpower/Gamesa Layout) and Exhibit 3B (GE Layout). In both updated turbine layouts, 18 turbine locations are the same as the locations identified in the original preliminary turbine layout provided with Lake Country's application for the Permit. Two of the original 20 turbine locations were removed from the northwest corner of the Project footprint based on avian surveys and recommendations from Lake Country's environmental consultants. Lake Country discussed this change in meetings with the U.S. Fish and Wildlife Service and the Minnesota Department of Natural Resources in December. Replacement locations for these two sites are identified in each of the new layouts in addition to two or three alternative locations. Lake Country is adding these alternative locations in order to potentially accommodate results of ongoing geotechnical, wind resource, and environmental impact analyses in its final micro-siting decisions. In total, the GE Layout includes 25 turbine locations and the REpower/Gamesa Layout includes 23 turbine locations.

#### Good Cause to Approve Requested Permit Amendment, as Revised

The Commission has routinely issued Large Wind Energy Conversion System site permits that list multiple turbine options in the manner being proposed by Lake Country in this letter. Further, the updated turbine layouts are designed to meet the requirements set forth in Section 4.0 of the Permit, including requirements relating to setbacks, noise, spacing, footprint minimization, aviation, and restrictions on siting turbines and associated facilities on public lands, wetlands, native prairies, and sand and gravel operations. To that end, Lake Country applied the same setbacks and constraints that it used to develop its original turbine layout. For example, each turbine will be set back at least 1,200 feet from residential dwellings, 400 feet from township roads, and 528 feet from other public

.

<sup>&</sup>lt;sup>1</sup> See, e.g., Findings of Fact, Conclusions of Law and Order Issuing a Site Permit to Getty Wind Company, LLC for the Getty Wind Project, Docket No. IP-6866/WS-11-831 (Jan. 28, 2013); Findings of Fact, Conclusions of Law and Order Issuing a Site Permit to Black Oak Wind, LLC for the Black Oak Wind Farm, Docket No. IP-6853/WS-10-1240 (Jan. 28, 2013).



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roads. Exhibits 3A and 3B show the updated layouts with the various constraints applied to identify buildable areas within the Project footprint.

In addition to continuing to apply the same conservative siting criteria, Lake Country is incorporating the results of ongoing wildlife surveys by relocating two turbines originally planned for the northwest corner of the Project footprint. The attached letter from Ron Peterson, National Wind, LLC's Director of Project Permitting and a wildlife biologist, comments in more detail on the environmental implications of the updated turbine layouts. As discussed in Mr. Peterson's letter, Lake Country will submit updated information regarding sound, shadow flicker, and other issues with reports already required in Section 6.0 of the Permit.

For the reasons described above and in Mr. Peterson's letter, Lake Country believes that selection of any of the three identified turbine models will not substantively alter the findings accompanying the Commission's original approval of the Permit nor the Commission's determination that the Project is compatible with environmental preservation, sustainable development, and efficient use of resources under Minn. Stat. 216F.03. This revised amendment request will provide Lake Country with needed flexibility to complete contract negotiations and move the Project toward construction without materially changing the Project's anticipated environmental impacts. For these reasons, there is good cause for the Commission to grant the requested amendment to Section 1.0 of the Permit.

Lake Country respectfully requests that the Commission approve the requested amendments to the Project's Permit as described in the Petition and as updated by this filing.

Sincerely,

Stoel Rives LLP

/s/ Sarah Johnson Phillips

Sarah Johnson Phillips

cc: Service List

Attachments:

Letter from Ron Peterson, Director – Project Permitting Exhibit 3A (REpower/Gamesa Layout) Exhibit 3B (GE Layout)



Lake Country Wind Energy, LLC 604 Pleasant Ave West Atwater, MN 56209

> Phone: 320-295-7570 Fax: 320-794-8180

March 12, 2013

Ms. Sarah Johnson Philips, Esq. Stoel Rives, LLP 33 South Sixth Street, Suite 4200 Minneapolis, MN 55402

Re: Environmental Implications of Alternative Turbine Technologies & Layouts

Lake Country Wind Energy Project Kandiyohi and Meeker Counties, MN Docket No. IP-6846/WS-10-798

Dear Sarah,

This letter is to provide an overview of the environmental implications of alternative turbine technologies and layouts we would like included in the requested amendment to the Site Permit for the Lake Country Wind Energy, LLC ("Lake Country") project ("Project") in Kandiyohi and Meeker counties, Minnesota. Due to volatility in the market for wind turbines, Lake Country would like to amend the extended Site Permit to allow for three alternative turbine technologies beyond the originally selected REpower 2.05 MW MM92 turbine:

- REpower 2.0 MW MM100
- Gamesa 2.0 MW G97
- General Electric (GE) 1.7-100 (1.7 MW)

The original Site Permit authorized up to 20 turbine locations with no alternate locations identified. Lake Country would like to include 2 to 3 alternate turbine locations in the amended Site Permit to facilitate resolution of any unanticipated issues that might arise with any specific turbine location. Optimized turbine layouts have been developed for each of the alternative turbine technologies, all of which use 18 of the originally approved 20 turbine locations. Two of the originally approved turbine locations northwest of Wheeler Lake have been removed due to avian concerns. The layouts for the REpower 2.0 MM100 and Gamesa G97 Turbine are identical, with 18 of the originally permitted locations, two new locations to replace those eliminated and three alternates (total of 23 locations). The layout for the GE 1.7-100 turbine includes 18 of the originally approved locations, five new locations (two of which replace those eliminated) and two alternates (total of 25 locations).

The Site Permit application for the Lake Country project provided analysis of environmental impacts in 18 subject areas. For many of these subject areas, the alternative turbine technologies and layouts being contemplated would generate negligible or no change in the potential for environmental effects. These subject areas include:

Demographics

Ms. Sarah Johnson Philips, Esq. March 12, 2013 Page 2

- Public Services and Infrastructure
- Recreational Resources
- Public Health and Safety
- Hazardous Materials
- Land Based Economics
- Tourism and Community Benefits
- Topography
- Soils
- Geologic and Groundwater Resources

For the remaining impact areas, a brief explanation is provided below as to why the alternative turbine technologies and layouts described above to not present a material change in environmental impacts from those contemplated in the Site Permit issued on February 8, 2011.

#### Noise

Based on the specifications obtained from the respective manufacturers, the three turbine models under consideration have similar noise generation characteristics. Noise emissions from the REpower MM92, the turbine model approved in the Site Permit, are 104.2 dBA at 10 meters in altitude and with a wind speed of 8 meters per second. At the same altitude and wind speed, the REpower MM100, Gamesa G97 and GE 1.7-100 generate noise levels of 104.8, 105.8 and 107 dBA, respectively. Lake Country is in the process of having noise modeling performed on these three turbine models to confirm that the turbine locations on the revised layouts will comply with Minnesota Pollution Control Agency ("MPCA") noise standards. Consistent with Section 6.6 of the previously approved Site Permit, Lake Country proposes to submit the results of this noise modeling (and a description of any noise mitigation measures found necessary) to the Commission at least 10 days prior to the pre-construction meeting.

If the modeling predicts that MPCA noise standards would be exceeded by a specific turbine model at a specific location, this situation would be addressed by one of the following measures: (1) selection of a turbine model that would not exceed MPCA noise standards; (2) elimination of the problematic turbine location in favor of a suitable alternate location; or (3) shift the turbine location during micro-siting to provide sufficient spatial separation between the turbine and the nearest residence. Again, any noise mitigation measures applied based on modeling results will be described in the noise report submitted to the Commission 10 or more days prior to the preconstruction compliance meeting.

#### Visual Impacts (including shadow flicker)

All of the additional and alternate turbine locations shown in Exhibits 3A and 3B have been placed in close proximity to previously approved turbine locations so as to minimize any potential for change in visual impacts. None of the new or alternate turbine locations would make turbines visible at a visual receptor where turbines would not have been visible under the approved Site Permit. All of the new and alternate turbine locations would be in excess of 1,200



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feet away from the nearest residence, as were the locations approved in the Site Permit. Like noise, shadow flicker will be modeled to ensure that the selected turbine technology and layout will not result in shadow flicker exposure that is materially different than that depicted in Figure 7 of the Site permit Application. The results of this modeling will be supplied to the Commission at least 10 days prior to the pre-construction compliance meeting, consistent with Section 6.2 of the Site Permit

If the modeling predicts that shadow flicker exposure levels would be higher than depicted in Figure 7 of the Site permit Application, this situation would be addressed through: (1) elimination of problematic turbine location(s) in favor of a suitable alternate location(s); (2) shifting problematic turbine location during micro-siting to increase spatial separation between the turbine and the nearest residence; or (3) visual screening measures as described in the original Site Permit application (e.g. planting of trees).

#### Cultural and Archaeological Resources

The only sections within the project footprint encompassing NRHP-listed or potentially eligible architectural resources are the four sections associated with the City of Atwater. Under both of the amended alternative turbine layouts, turbine locations within these sections remain unchanged from the layout approved in the Site Permit. Like the layout approved in the Site Permit, the alternative layouts depicted in Exhibits 3A and 3B both comply with the 1,200 foot setback from residential structures. Accordingly, there appears to be no material difference between the approved and proposed amended turbine layouts with regard to listed or potentially eligible architectural resources.

It is possible that archaeological resources could exist at some of the new or alternate turbine locations or along associated access road or collector cable routes. Upon selection of a final turbine layout and design of associated infrastructure, Lake Country will coordinate further with the State Historic Preservation Office and will complete the Phase I archaeology survey required by Section 6.3 of the Site Permit. If the Phase I pedestrian survey reveals any potentially eligible archaeological sites that would be affected by project infrastructure, such sites would be avoided through: (1) elimination of problematic turbine location(s) in favor of a suitable alternate location(s) or (2) shifting the location of the problematic turbine or associated infrastructure to avoid the resource.

## Surface Water and Floodplain Resources

None of the new turbine locations will encroach upon any of the surface waters and floodplains identified in the Site Permit application.

#### Wetlands

None of the new turbine locations are within wetlands identified in the original Site Permit application and all meet Kandiyohi County's 600 foot setback requirement for public waters



Ms. Sarah Johnson Philips, Esq. March 12, 2013 Page 4

wetlands. Avoidance of wetlands in turbine placement will be confirmed at the time of micrositing.

#### Vegetation

All new turbine locations would be in cropland and would not affect grassland or forested areas.

### Wildlife

Two turbine locations northwest of Wheeler Lake have been eliminated to reduce the potential for conflicts with avian activity around the lake. New alternative turbine locations have all been sited near previously approved turbine locations to minimize the potential for new avian conflicts. All new and alternative turbine locations have been sited in cropland, so as to avoid potential wildlife habitat associated with grasslands, wetlands or wooded areas.

### Rare & Unique Natural Resources

None of the new or alternative locations involve known rare or unique resources. As previously stated, all of the new and alternative turbine locations are on cropland. Once a final turbine layout has been selected and associated infrastructure has been designed, Lake Country will commission a final review by qualified biologists and/or botanists of the areas to be disturbed by construction. If any previously unidentified rare or unique resources are found during this review, impacts will be avoided through: (1) elimination of problematic turbine location(s) in favor of a suitable alternate location(s) or (2) shifting the location of the problematic turbine or associated infrastructure to avoid the resource.

For the foregoing reasons, Lake Country believes that the alternative turbine technologies and layouts described above would not generate any material changes in environmental effects, as compared to the turbine technology and layout approved in the original Site Permit.

Please let me know if you have any questions or comments on the foregoing discussion.

Sincerely,

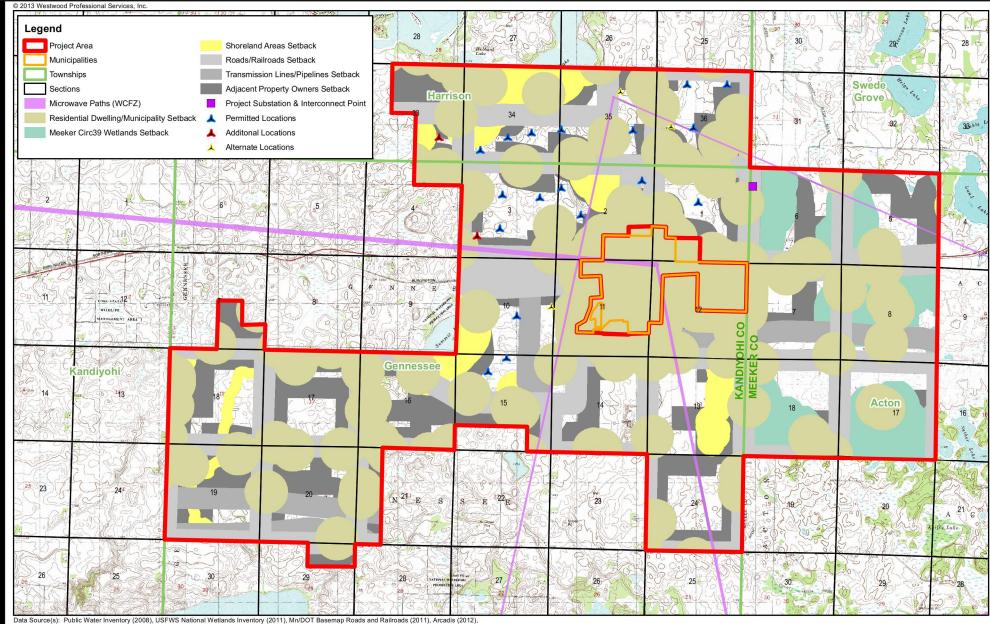
LAKE COUNTRY WIND ENERGY, LLC

Ronald P. Peterson

Director – Project Permitting

Attachments





Data Source(s): Public Water Inventory (2008), USFWS National Wetlands Inventory (2011), Mn/DOT Basemap Roads and Railroads (2011), Arcadis (20 National Pipeline Mapping System (Accessed 2013), Ventyx Velocity Suite (2013), National Wind (2013), and Westwood Professional Services (2013).

PRELIMINARY AND SUBJECT TO CHANGE.

Created: March 11, 2013



Westwood Professional Services, Inc. 7699 Anagram Drive Eden Prairie. MN 55344

PHONE 952-937-5150 FAX 952-937-5822 TOLL FREE 1-888-937-5150

www.westwoodps.com



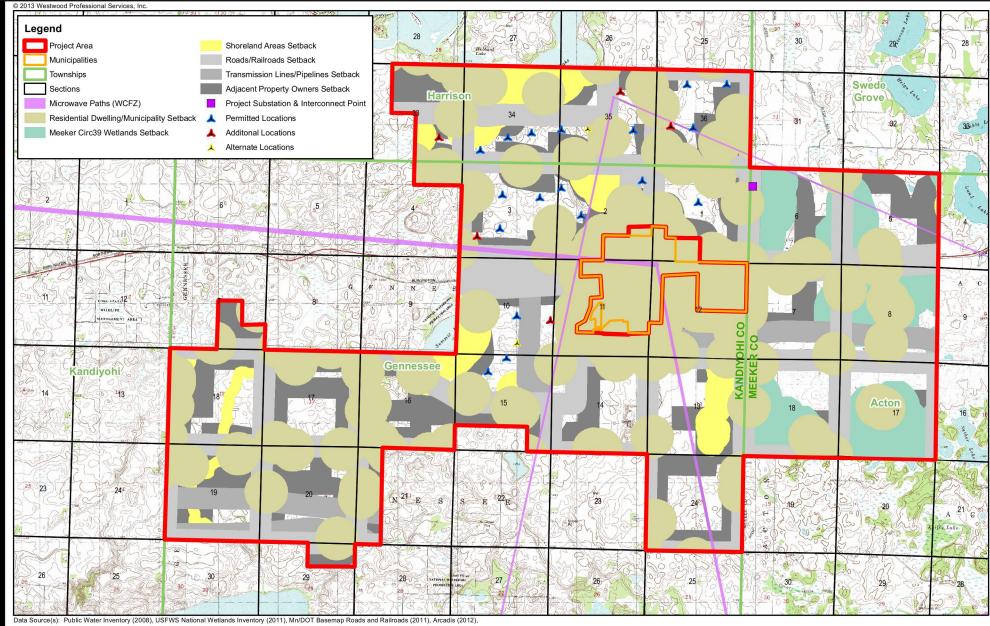
# Lake Country Wind Energy, LLC

Kandiyohi and Meeker Counties, Minnesota



Project Constraints
Gamesa/REpower 2.0 MW

**EXHIBIT 3A** 



National Pipeline Mapping System (Accessed 2013), Ventyx Velocity Suite (2013), National Wind (2013), and Westwood Professional Services (2013).

PRELIMINARY AND SUBJECT TO CHANGE.

Created: March 8, 2013



Westwood Professional Services, Inc. 7699 Anagram Drive Eden Prairie, MN 55344

952-937-5150 952-937-5822 TOLL FREE 1-888-937-5150

www.westwoodps.com

# Lake Country Wind Energy, LLC

Kandiyohi and Meeker Counties, Minnesota

Miles

**Project Constraints GE 1.7 MW** 

**EXHIBIT 3B** 

### **PUC Docket No. IP6846/WS-10-798**

## STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

#### AFFIDAVIT OF SERVICE

STATE OF MINNESOTA	)	
	)	SS
COUNTY OF HENNEPIN	)	

Sarah Johnson Phillips, of the City of Minneapolis, County of Hennepin, State of Minnesota, being first duly sworn, deposes and says that on the 12th day of March, 2013, she served the attached Petition for Site Permit Amendment to all said persons on the attached service list, true and correct copies, by electronic filing.

Sarah Johnson Phillips

Subscribed and sworn to before me this 12th day of March, 2013.

Sharle Backer



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julia	Anderson	Julia.Anderson@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	No	OFF_SL_10-798_WS-10-798
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson & Byron, P.A.	200 S 6th St Ste 4000  Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_10-798_WS-10-798
Will	Cooksey	wcooksey@nationalwind.co m	National Wind, LLC	706 2nd Ave S Suite 1200 Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-798_WS-10-798
Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.	200 South Sixth Street Suite 4000 Minneapolis, Minnesota 55402-1125	Electronic Service	No	OFF_SL_10-798_WS-10-798
Scott	Ek	scott.ek@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 55101	Electronic Service	No	OFF_SL_10-798_WS-10-798
Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 500  Saint Paul,  MN  551012198	Electronic Service	No	OFF_SL_10-798_WS-10-798
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	No	OFF_SL_10-798_WS-10-798
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	No	OFF_SL_10-798_WS-10-798
Deborah	Pile	Deborah.Pile@state.mn.us	Department of Commerce	Suite 50085 7th Place East  St. Paul, MN 551012198	Electronic Service	No	OFF_SL_10-798_WS-10-798